

Application No. 10/699,364

REMARKS

Claims 1-26 are pending. Currently claims 1-26 stand as rejected, and Applicants respectfully request reconsideration of the rejections based upon the following comments.

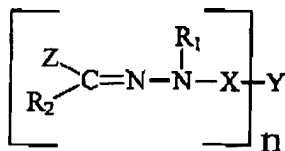
Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-26 under 35 U.S.C. § 103(a) as being unpatentable over JP 57-189142 (the JP '142 reference) in view of U.S. Patent 5,389,480 to Ono (the '480 patent). More specifically, the Examiner asserted that the JP '142 reference teaches "an organophotoreceptor with a charge transport material containing a similar heterocyclic group as represented by Z in the instant formula of the claims." Additionally, the Examiner asserted that the '480 patent "teaches similar organophotoreceptor with a charge transport material containing substituted linking groups." Applicants submit that the combination of the JP '142 reference and the '480 patent does not render Applicants' invention, as claimed in independent claims 1, 8, 15 and 23, prima facie obvious. Applicants respectfully request reconsideration of the rejection based on the following comments.

In order to establish a prima facie case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." See MPEP § 2143. Additionally, there must be a reasonable expectation of success, and the "teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure." Id.

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Applicants' invention, as claimed in independent claims 1, 8, 15 and 23, relates to a charge transport material having the formula



wherein Y comprises a bond, C, N, O, S, a branched or linear $-(\text{CH}_2)_p-$ group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR_7 group where R_7 is hydrogen atom, an alkyl group, or aryl group, wherein Y has a multivalent structure selected to form n bonds with the corresponding X groups, and Z comprises a heterocyclic group selected from the group consisting of phenothiazine group, phenoxazine group, phenoxathiin group, dibenzo(1,4)dioxin group, thianthrene group, and phenazine group.

With respect to the JP '142 reference, that reference relates to a hydrazone compound having a heterocyclic group at one end of the compound and an R_3 group at the opposite end, wherein R_3 can be hydrogen, a lower alkyl group or a lower alkoxy group. As such, the R_3 group in the JP '142 reference is a monovalent group that cannot bond to two or more groups, and therefore cannot be a linking group. Additionally, since the R_3 group is disclosed as a monovalent group, JP '142 does not suggest or motivate the formation of Applicants' claimed charge transport materials, which comprises a multivalent Y group that forms n bonds with corresponding X groups. In other words, the JP '142 reference does not suggest or provide motivation for linking two or more hydrazone compounds together. Additionally, since the R_3 group is monovalent, the JP '142 references teaches away from incorporating the linking groups

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of the '480 patent into the hydrazone compounds of the JP '142 reference. As such, there is no suggestion or motivation to combine the linking groups of the '480 patent to link the compounds of the JP '142 reference.

Furthermore, with all due respect, Applicants could not identify in the '480 patent "similar linking groups" for forming linked hydrazone groups as taught and claimed by Applicants. Therefore, this feature is missing from the cited references.

Moreover, even assuming *arguendo* that there is motivation to combine the JP '142 reference and the '480 patent to form Applicants' claimed charge transport materials, there is no reasonable likelihood of success in combining the cited references. More specifically, neither the JP '142 reference nor the '480 patent provide any guidance or synthetic approaches for linking the hydrazone compounds of the JP '142 reference using the linking groups of the '480 patent. At a minimum, significant additional experimentation and research would have to be conducted in order to modify the disclosures of cited references to form Applicants' claimed charge transport materials, especially considering that the linking groups of the '480 patent do not link hydrazone compounds that are structurally similar to the compounds disclosed in the JP '142 reference. For example, the linking groups shown in compounds (2-13)-(2-15) of the '480 patent are bonded to the opposite side of the hydrazone group than the R_3 group in the JP '142 reference, and thus the R_3 group of the JP '142 reference cannot simply be replaced in the linking group of the '480 patent without significant experimentation. Therefore, there is no reasonable likelihood of success in combining the JP '142 reference and the '480 patent to form Applicants' claimed charge transport materials.

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Since there is no motivation to combine, all of the elements are not taught, and there is no reasonable likelihood of success in combining the JP '142 reference and the '480 patent to form Applicants' claimed charge transport materials, the combination of the JP '142 reference and the '480 patent does not render Applicants' invention, as claimed in independent claims 1, 8, 15 and 23, prima facie obvious. Thus, Applicants respectfully request the withdrawal of the rejection of claims 1-26 under 35 U.S.C. § 103(a) as being unpatentable over the JP '142 reference in view of U.S. Patent the '480 patent.

CONCLUSION

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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